Claims

1. A peptide composed of at least 23 residues from the N-terminal of the peptide represented by formula (I) or a pharmaceutically acceptable salt thereof:

His-Ser-Asp-Ala-A-Phe-Thr-B-C-Tyr-D-Arg-E-Arg-F-Gln-G-Ala-Val-H-I-Tyr-Leu-Ala-Ala-J-K-L (SEQ ID NO: 1) (I)

wherein A represents Val or Ile; B represents Asp, Glu, or Ala; C represents Asn or Ser; D represents Thr or Ser; E represents Leu or Tyr; F, H, and I each independently represent Lys or Arg; G represents Leu or nLeu; J represents Ile or Val; K represents Leu, Leu-Asn, Leu-Gly, Leu-Gly-Lys, Leu-Gly-Arg, Leu-Gly-Lys-Lys, Leu-Gly-Lys-Arg, Leu-Gly-Arg-Arg, Leu-Gly-Lys-Arg-Tyr-Lys-Gln-Arg-Val-Lys-Asn-Lys, or Leu-Gly-Arg-Arg-Tyr-Arg-Gln-Arg-Val-Arg-Asn-Arg; and L represents a moiety of the α-carboxyl group of the C-terminal amino acid which may be modified; i.e., $-NH_2$ or -OH.

2. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, which consists of 23 amino acid residues from the N terminus of the peptide represented by formula (I), wherein A represents Val; B represents Asp; C represents Asn; D represents Thr; E represents Leu; F, H, and I each independently represent Arg; G represents Leu; and L represents $-NH_2$.

3. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Val; B represents Asp; C represents Asn; D represents Thr; E represents Leu; F, H, and I each independently represent Arg; G represents Leu; J represents Ile; K represents Leu-Gly-Arg-Arg; and L represents $-NH_2$.

4. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Val; B represents Glu; C represents Asn; D represents Thr; E represents Leu; F, H, and I each independently represent Arg; G

represents Leu; J represents Ile; K represents Leu-Gly-Arg-Arg; and L represents -NH_2.

5. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Val; B represents Ala; C represents Asn; D represents Thr; E represents Leu; F, H, and I each independently represent Arg; G represents Leu; J represents Ile; K represents Leu-Gly-Arg-Arg; and L represents -NH_2.

6. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Val; B represents Asp; C represents Asn; D represents Thr; E represents Leu; F, H, and I each independently represent Arg; G represents Leu; J represents Val; K represents Leu-Gly-Arg-Arg; and L represents -NH_2.

7. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Ile; B represents Asp; C represents Ser; D represents Ser; E represents Tyr; F, H, and I each independently represent Arg; G represents Leu; J represents Val; K represents Leu-Gly-Arg-Arg; and L represents -NH_2.

8. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, wherein, in formula (I), A represents Ile; B represents Asp; C represents Ser; D represents Ser; E represents Tyr; F, H, and I each independently represent Arg; G represents Leu; J represents Val; K represents Leu-Gly-Arg-Arg-Tyr-Arg-Gln-Arg-Val-Arg-Asn-Arg; and L represents -NH_2.

9. The peptide according to claim 1 or a pharmaceutically acceptable salt thereof, which consists of 23 amino acid residues from the N terminus of the peptide represented by formula (I), wherein A represents Ile; B represents Asp; C represents Ser; D represents Ser; E represents Tyr; F, H, and I each independently represent Arg; G represents Leu; and L represents -NH_2.

10. A pharmaceutical composition comprising the peptide according to any one of claims 1 to 9 or a pharmaceutically acceptable salt thereof.

11. The pharmaceutical composition according to claim 10, which comprises the peptide according to any one of claims 1 to 9 or a pharmaceutically acceptable salt thereof in an amount of at least 50% by weight based on the entire biologically active peptide as an active ingredient.

12. The pharmaceutical composition according to claim 10 or 11 for treating or preventing one or more diseases or symptoms selected from the group consisting of ischemic cerebrovascular disorders including cerebral embolism and cerebral thrombosis, diseases causing toxicity to the central or peripheral nervous system, conformational diseases, neurodegenerative diseases, hair loss, erectile dysfunction, dementia, kidney failure, optic nerve degenerative diseases including atrophy of optic nerve and ischemic optic neuropathy, and retinal degenerative diseases, for improving blood flow, for relaxing the bronchial smooth muscle, or for inhibiting the movement in the gastrointestinal tract.